ABSTRACT OF THE DISCLOSURE

A highly available communications system capable of circuit reestablishment and tear-down without manual intervention. The communications system includes a plurality of nodes interconnected by a plurality of communications paths to form at least one communications network. The nodes forward control packets on the network by way of a signaling protocol employing an out-of-band control technique. At least a portion of the nodes comprises a software configuration including a topology manager and a protocol manager. The protocol manager is operative to determine whether a control path is operational and whether a data transmission channel along a corresponding data path is established. In the event the control path is not operational, the protocol manager maintains the data transmission channel along the data path so long as the channel is established. The topology manager is operative to acquire network topology data, and the protocol manager is further operative to receive the topology data, deduce network topology changes therefrom, and reestablish and tear-down communications paths interconnecting the nodes based at least in part on the deduced topology changes.

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